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ABSTRACT

This report presents 4 tables that give a summary of all research doctorates earned during the period July 1, 1969 through June 30, 1970. Highlights of the findings are: (1) there were 14.4% more Ph.D.'s granted in fiscal year 1970 than the previous year; (2) 78.8% of all doctorate recipients planned to enter regular employment following graduation, 13.1% planned postdoctoral study, 1.7% were scheduled for military service, and 6.4% were uncertain; and (3) of those entering regular employment, 70% were to be employed in educational institutions, 15% in industry and business, 9% in government, and about 3% in nonprofit organizations. (HS)

ED 058820

NATIONAL RESEARCH COUNCIL

Summary Report 1970 DOCTORATE RECIPIENTS FROM UNITED STATES UNIVERSITIES

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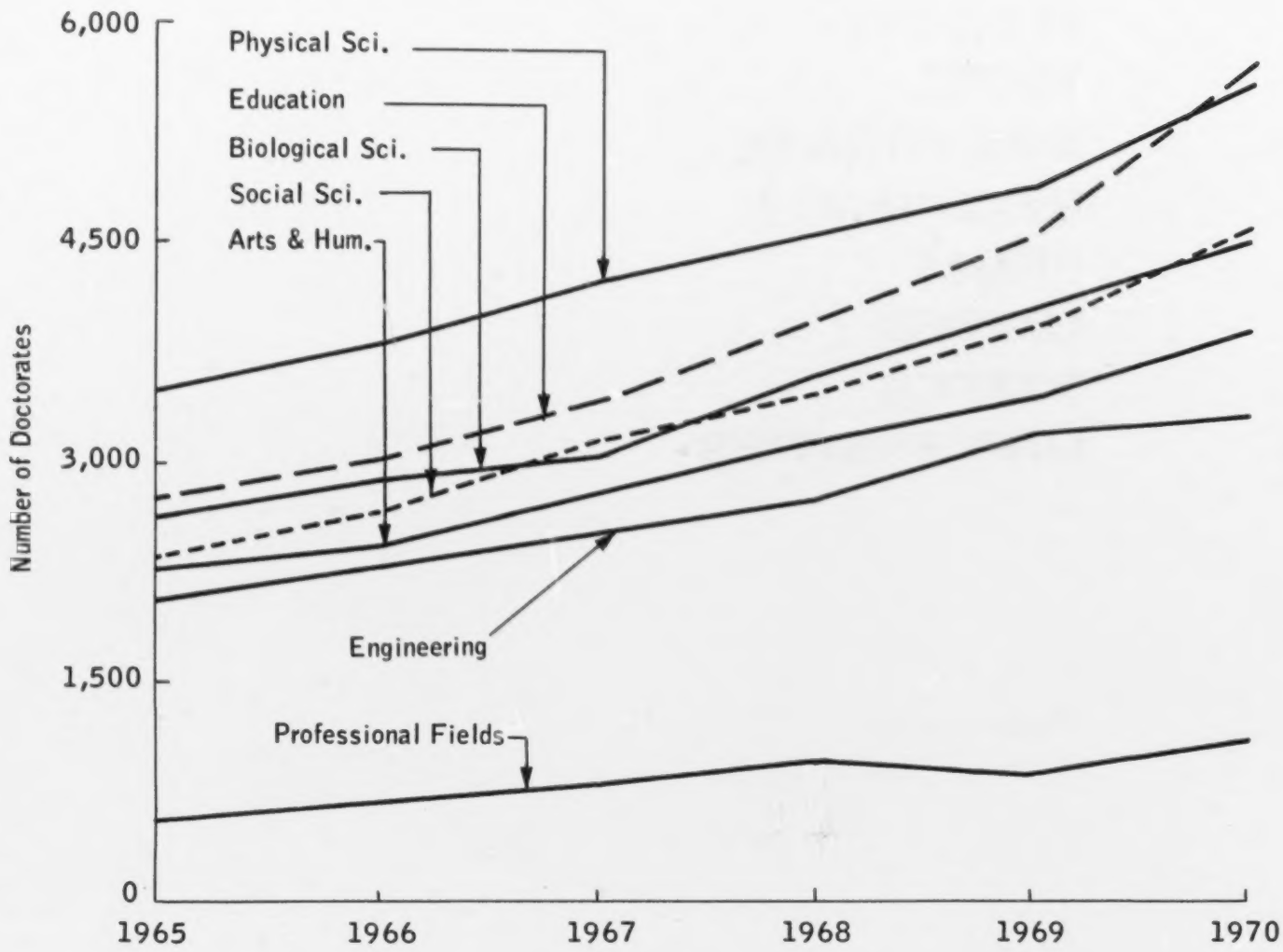
Summary Report 1970 DOCTORATE RECIPIENTS FROM UNITED STATES UNIVERSITIES

Prepared in the
Manpower Studies Branch

Office of Scientific Personnel
National Research Council
Washington, D.C.

OSP-MS-4
MARCH 1971

Number of Doctorate Recipients in Seven Summary Fields and Percent Change from Previous Year, FY 1965–1970



		1965	1966	1967	1968	1969	1970
Physical Sciences	N	3,543	3,828	4,306	4,612	4,964	5,607
	% Change	+13.7	+ 8.0	+12.5	+ 7.1	+ 7.6	+13.0
Engineering	N	2,068	2,299	2,581	2,833	3,234	3,432
	% Change	+25.1	+11.2	+12.3	+ 9.8	+14.2	+ 6.1
Biological Sciences	N	2,679	2,885	3,116	3,681	4,116	4,564
	% Change	+13.4	+ 7.7	+ 8.0	+18.1	+11.8	+10.9
Social Sciences	N	2,377	2,691	3,157	3,538	4,024	4,649
	% Change	+ 3.2	+13.2	+17.3	+12.1	+13.7	+15.5
Arts & Humanities	N	2,324	2,508	2,859	3,177	3,544	4,044
	% Change	+17.3	+ 7.9	+14.0	+11.1	+11.6	+14.1
Professional Fields	N	584	676	834	979	1,234	1,304
	% Change	+10.8	+15.8	+23.4	+17.4	+26.0	+ 5.7
Education	N	2,727	3,043	3,442	4,014	4,618	5,836
	% Change	+16.0	+11.6	+13.1	+16.6	+15.0	+26.4
Total	N	16,302	17,954	20,295	22,834	25,734	29,436
	% Change	+10.8	+10.1	+13.0	+12.5	+12.7	+14.4

- Number of Doctorate Recipients in Seven Summary Fields and Percent Change from Previous Year, FY 1965-1970
- TABLE 1 — Number of Doctorate Recipients, by Subfield of Doctorate, FY 1970
- TABLE 2 — Statistical Profile of Doctorate Recipients, by Field of Doctorate, FY 1970
- TABLE 3 — Percentage of Doctorate Recipients, by Sources of Support in Graduate School, by Summary Field of Doctorate, FY 1970
- TABLE 4 — Number of Doctorate Recipients by State and Summary Field of Doctorate; Number of Doctorate-Granting Institutions by State, FY 1970

The following tables present a brief summary of data gathered from the Survey of Earned Doctorates during fiscal year 1970. The Survey is conducted by means of a questionnaire form distributed annually by the Office of Scientific Personnel (OSP) of the National Research Council. Forms, distributed with the cooperation of the Graduate Deans, are filled out by graduates as they complete all requirements for their doctoral degrees. The data in this report refer to all research doctorates earned during the period July 1, 1969-June 30, 1970, but they do not include professional degrees such as the MD, DDS, and DVM.

This is the fourth in a series of yearly summaries of data from the Survey of Earned Doctorates. The OSP publishes data gathered during a given fiscal year in the following fiscal year. The statistics thus made available may be used to update some of those in the book, Doctorate Recipients from United States Universities 1958-1966 (NAS Publication 1489).

The distribution of the Survey of Earned Doctorates questionnaire, the maintenance of the resulting data file, and the publication of this report are supported jointly by the National Science Foundation, the United States Office of Education, and the National Endowment for the Humanities. The OSP wishes to express its appreciation to these agencies for their assistance.

The Office of Scientific Personnel is concerned with programs that strengthen higher education and develop better understanding of the educational process. It is hoped that prompt reporting of these data to educational, governmental, and professional agencies will facilitate higher education

planning. Suggestions for improvement of the content or format of the report will be welcomed. Such communications may be directed to the Office of Scientific Personnel, National Research Council, 2101 Constitution Avenue, Washington, D.C. 20418.

DEFINITIONS OF TERMS

Table titles and headings are generally self-explanatory, but a few terms need special definition or explanation.

Table 2:

"Age at Doctorate"--Q_1 (first quartile): One quarter received the doctorate at this age or younger; Q_2 (second quartile or median): One half received the doctorate at this age or younger; Q_3 (third quartile): Three fourths received the doctorate at this age or younger.

"Percent with Master's"--This indicates the percentage of doctorate recipients in a field who received a master's degree in any field before taking the doctorate.

"Median Time Lapse"--Total Time refers to total calendar time elapsed between year of baccalaureate and year of doctorate; Registered Time refers to the total time registered in a university between baccalaureate and doctorate.

Postdoctoral activities are grouped as: Postdoctoral study (fellowship, traineeship, other), Employment (educational institution, industry, etc.), or Unknown. The sum of the columns of percentages totals 100% with allowance for rounding. For example, 20.2% of the chemists accepted postdoctoral fellowships, 0.4% held traineeships, and 16.2% received research associateships or some other form of postdoctoral study grant; 59.3% were employed; and 3.5% did not indicate their postdoctoral activities. The percentages listed by type of employer (educational institution, industry, etc.) total to the 59.3% employed.

Percentages showing distribution by postdoctoral work activity are based only on those who were going into postdoctoral employment. They exclude those going on in postdoctoral study.

Table 3:

Data in Table 3 describe sources of financial support during graduate school. The question was answered by 28,044 (95%) of the FY 1970 doctorate recipients. The data in the table would be interpreted as follows: 682 doctorate recipi-

ents in the physical sciences reported financial support from NSF fellowships during graduate school. This number is 12.6% of all the physical science doctorates who answered the question, and it is 38.5% of those in all fields that reported NSF fellowship support. Since students may have multiple sources of support, the vertical percentages sum to more than 100%.

Table 4:

Table 4 shows both the number of persons receiving doctorates from universities in a given state and the number of institutions that granted one or more doctorates in any field during FY 1970.

HIGHLIGHTS

- There were 14.4% more PhD's granted in FY 1970 than in the previous year; this is the highest growth rate since the immediate post-World War II period. The trend data for the various fields and for the total of all fields are shown in the frontispiece and its accompanying table. Growth rates for the several fields fluctuate more from year to year than does the overall rate. This is in part because the numbers in some fields are not large enough to stabilize the ratios, and because an unusually large number (essentially a random fluctuation) in any given year creates a large base for computing the ratio for the following year, and hence an unusually low growth increment.
- Over three fourths (78.8%) of all doctorate recipients planned to enter regular employment following graduation. About one eighth (13.1%) planned postdoctoral study; 1.7% were scheduled for military service, and one sixteenth (6.4%) were uncertain as to their postdoctoral activity at the time of graduation. These percentages differ only fractionally from FY 1969. Variations by field are noteworthy; in the natural sciences about one in three planned postdoctoral study, while in the social sciences only 7.7% and in the humanities, arts, and professions only 1.8% planned such further training.
- Of those entering regular employment, most--approximately 70%--were to be employed in educational institutions, 15% in industry and business, 9% in government, and about 3% in nonprofit organizations. These percentages, too, vary by field; the major employers of chemists and engineers are business and industry, while in all other fields academic employment predominates.

TABLE 1
NUMBER OF DOCTORATE RECIPIENTS, BY SUBFIELDS, FISCAL YEAR 1970

SUBFIELD OF DOCTORATE	NUMBER OF DOCTORATES
TOTAL ALL FIELDS	29436
PHYSICAL SCIENCES	5607
MATHEMATICS	1218
ALGEBRA	190
ANALYSIS	244
GEOMETRY	39
LOGIC	37
NUMBER THEORY	27
PROBABILITY,MATH STATISTICS	83
TOPOLOGY	143
COMPUTING THEORY AND PRACTICE	118
APPLIED MATHEMATICS	147
MATHEMATICS OF RESOURCE USE	6
MATHEMATICS,GENERAL	94
MATHEMATICS,OTHER	90
PHYSICS AND ASTRONOMY	1657
ASTRONOMY	48
ASTROPHYSICS	63
ATOMIC AND MOLECULAR PHYSICS	152
ELECTROMAGNETISM	18
MECHANICS	7
ACOUSTICS	22
FLUIDS	21
PLASMA PHYSICS	85
OPTICS	30
THERMAL PHYSICS	17
ELEMENTARY PARTICLES	258
NUCLEAR STRUCTURE	212
SOLID STATE	402
PHYSICS,GENERAL	162
PHYSICS,OTHER	160
CHEMISTRY	2223
ANALYTICAL	158
INORGANIC	302
ORGANIC	838
NUCLEAR	34
PHYSICAL	554
THEORETICAL	63
AGRICULTURAL AND FOOD	62
PHARMACEUTICAL	57
CHEMISTRY,GENERAL	86
CHEMISTRY,OTHER	69
EARTH SCIENCES	509
MINERALOGY,PETROLOGY	57
GEOCHEMISTRY	40
STRATIGR,SEDIMENTATION	56
PALEONTOLOGY	40
STRUCTURAL GEOLOGY	12
GEOPHYSICS	66
GEOMORPHOL,GLACIAL GEOLOGY	17
HYDROLOGY	20
OCEANOGRAPHY	66
METEOROLOGY	55
APPL GEOL,GEOL ENG,ECON GEOL	17
FUEL TECHNOL,PETROL ENG	11
EARTH SCIENCES,GENERAL	29
EARTH SCIENCES,OTHER	23

SUBFIELD OF DOCTORATE	NUMBER OF DOCTORATES
ENGINEERING	3432
AERONAUTICAL AND ASTRONAUTICAL	203
AGRICULTURAL	56
BIOMEDICAL ENGINEERING	45
CIVIL	310
CHEMICAL	445
CERAMIC	46
ELECTRICAL	706
ELECTRONICS	150
INDUSTRIAL	115
ENGINEERING MECHANICS	235
ENGINEERING PHYSICS	41
MECHANICAL	399
METALLURGY AND PHYS MET ENG	222
SANITARY	55
MINING ENGINEERING	10
ENGINEERING,GENERAL	41
ENGINEERING,OTHER	353
BIOLOGICAL SCIENCES	4564
BIOCHEMISTRY	580
BIOPHYSICS	106
BIOMETRICS,BIOSTATISTICS	37
PHYSIOLOGY,ANIMAL	343
PHYSIOLOGY,PLANT	95
MOLECULAR BIOLOGY	94
ANATOMY	124
CYTOLOGY	56
ENTOMOLOGY	178
MICROBIOLOGY	399
GENETICS	150
EMBRYOLOGY	41
ECOLOGY	112
HYDROBIOLOGY	28
BOTANY	176
ZOOLOGY	341
BIOL SCIENCES,GENERAL	121
BIOL SCIENCES,OTHER	181
AGRICULTURE AND FORESTRY	914
AGRONOMY	198
ANIMAL HUSBANDRY	123
FISH AND WILDLIFE	47
FORESTRY	74
HORTICULTURE	69
PHYTOPATHOLOGY	105
AGRICULTURE,GENERAL	4
AGRICULTURE,OTHER	294
HEALTH SCIENCES	488
MEDICINE AND SURGERY	6
PHARMACY	51
PUBLIC HEALTH	69
VETERINARY MEDICINE	47
HOSPITAL ADMINISTRATION	10
PHARMACOLOGY	148
PATHOLOGY	40
HEALTH SCIENCES,GENERAL	23
HEALTH SCIENCES,OTHER	94

SUBFIELD OF DOCTORATE	NUMBER OF DOCTORATES
SOCIAL SCIENCES	**4649**
ANTHROPOLOGY	217
ARCHEOLOGY	8
SOCIOLOGY	506
ECONOMICS	823
ECONOMETRICS	27
STATISTICS	121
POLITICAL SCIENCE,PUBLIC ADMIN	535
INTERNATIONAL RELATIONS	99
GEOGRAPHY	137
AREA STUDIES	70
SOCIAL WORK	87
SOCIAL SCIENCES,GENERAL	20
SOCIAL SCIENCES,OTHER	116
PSYCHOLOGY	1883
CLINICAL	549
COUNSELING AND GUIDANCE	113
DEVELOP AND GERONTOL	83
EDUCATIONAL	87
SCHOOL PSYCHOLOGY	45
EXPERIMENTAL	366
COMPARATIVE	22
PHYSIOLOGICAL	116
INDUSTRIAL AND PERSONNEL	75
PERSONALITY	50
PSYCHOMETRICS	18
SOCIAL	157
PSYCHOLOGY,GENERAL	120
PSYCHOLOGY,OTHER	82
ARTS AND HUMANITIES	**4044**
HISTORY,GENERAL AND OTHER	306
HISTORY,AMERICAN	458
HISTORY,EUROPEAN	328
AMERICAN LANG AND LIT	179
ENGLISH LANG AND LIT	914
GERMAN LANG AND LIT	139
FRENCH LANG AND LIT	201
SPANISH AND PORTUGUESE LANG AND LIT	167
LINGUISTICS	138
ITALIAN LANG AND LIT	16
RUSSIAN LANG AND LIT	42
ALL OTHER MODERN LANGUAGES	81
CLASSICAL LANG AND LIT	86
PHILOSOPHY	350
SPEECH AS A DRAMATIC ART	267
ART,FINE AND APPLIED	10
ART,HISTORY AND CRITICISM	82
MUSIC	162
ARTS AND HUMANITIES,GENERAL	23
ARTS AND HUMANITIES,OTHER	95
PROFESSIONAL FIELDS	**1113**
BUSINESS ADMINISTRATION	584
RELIGION AND THEOLOGY	212
HOME ECONOMICS	50
JOURNALISM	27

SUBFIELD OF DOCTORATE	NUMBER OF DOCTORATES
LAW,JURISPRUDENCE	36
LIBRARY AND ARCHIVAL SCIENCE	41
SPEECH AND HEARING SCIENCES	116
PROFESSIONAL FIELDS, OTHER	47
EDUCATION	**5836**
ELEMENTARY EDUCATION, GENERAL	283
SECONDARY EDUCATION, GENERAL	213
FOUNDATIONS,SOCIAL,PHILOS	258
EDUCATIONAL PSYCHOLOGY	462
EDUCATIONAL MEAS AND STATISTICS	95
EDUCATIONAL ADMIN AND SUPERVISION	1427
GUIDANCE,COUNS,STUDENT PERSONNEL	667
SPECIAL EDUC,GIFTED,HANDICAPPED,ETC	250
AUDIO-VISUAL MEDIA	109
AGRICULTURE	43
ART	43
BUSINESS	80
ENGLISH	76
FOREIGN LANGUAGE	33
HOME ECONOMICS	28
INDUSTRIAL ARTS	72
MATHEMATICS	128
MUSIC	101
PHYS ED, HEALTH, AND REC	336
SCIENCE EDUCATION	184
SOCIAL SCIENCE EDUCATION	71
VOCATIONAL EDUCATION	71
OTHER SPECIAL FIELDS	112
EDUCATION,GENERAL	193
EDUCATION,OTHER	501
OTHER AND UNSPECIFIED	**191**

SOURCE: NRC, Office of Scientific Personnel, Doctorate Records File

TABLE 2
STATISTICAL PROFILE OF FY 1970 DOCTORATE RECIPIENTS, BY FIELD OF DOCTORATE

	FY 1970 TOTAL	MATHEMATICS	PHYSICS AND ASTRONOMY	CHEMISTRY	EARTH SCIENCES	ENGINEERING	AGRICULTURE & FORESTRY	HEALTH SCIENCES	BIOCHEM, BIOPHYS, PHYSIOL, MOLECULAR BIOL	ANAT, CYTOL, ENTOMOL, GENET, MICROBIO, EMBRY	ECOLOGY, HYDROBIOLOGY	BOT, ZOOL, GEN BIOLOGY
NUMBER IN FIELD	29436	1218	1657	2223	509	3432	914	488	1255	948	140	819
MALE %	86.5	93.7	97.2	91.9	96.8	99.5	97.5	86.0	84.9	81.8	95.7	84.1
FEMALE %	13.4	6.2	2.7	8.1	3.1	.4	2.4	13.9	15.0	18.1	4.2	15.8
U.S. CITIZENS %	84.2	83.0	80.7	83.8	78.5	73.0	69.0	74.5	82.4	81.7	88.5	87.1
FOREIGN CITIZENS %	14.0	15.6	17.2	15.2	20.2	26.3	30.6	23.5	16.8	17.6	11.4	11.8
UNKNOWN %	1.6	1.3	2.0	.9	1.1	.6	.3	1.8	.7	.6	.0	.9
MARRIED %	76.1	70.2	72.0	72.9	79.9	79.3	83.2	77.6	77.2	75.9	87.1	76.9
NOT MARRIED %	20.8	27.4	23.7	25.1	17.2	18.8	15.3	19.0	21.1	22.1	12.8	20.3
UNKNOWN %	3.0	2.3	4.2	1.8	2.7	1.8	1.4	3.2	1.6	1.9	.0	2.6
AGE AT DOCTORATE												
Q1 YRS	27.8	26.7	27.2	26.7	27.9	27.4	27.8	28.2	27.1	27.2	27.6	27.6
Q2 YRS	30.7	28.1	28.5	27.8	30.3	29.5	30.2	31.3	28.5	29.0	29.6	29.6
Q3 YRS	35.9	30.7	30.8	30.1	33.9	32.7	34.5	36.9	31.3	32.5	32.2	33.0
PERCENT WITH BACC IN SAME FIELD AS DOCT	59.5	75.3	76.7	86.9	57.1	87.7	73.1	34.6	7.0	15.4	5.0	68.5
PERCENT WITH MASTER'S	78.6	78.1	63.7	38.1	77.0	89.8	88.4	63.5	47.7	65.7	79.2	73.1
MEDIAN TIME LAPSE FROM BACC TO DOCT												
TOTAL TIME YRS	7.9	6.0	6.4	5.6	7.7	7.0	7.2	8.0	6.0	6.2	6.7	7.0
REGISTERED TIME YRS	5.6	5.2	5.8	5.0	5.7	5.2	5.2	5.2	5.3	5.2	5.8	5.6
POSTDOCTORAL STUDY %												
FELLOWSHIP	8.0	4.9	11.5	20.2	8.4	3.2	6.1	17.4	40.7	31.7	16.4	21.9
TRAINEESHIP	.5	.2	.1	.4	.2	.2	.5	2.0	2.8	1.5	.7	1.1
OTHER	6.0	2.7	25.8	16.2	13.9	4.6	7.0	9.0	15.0	12.6	7.1	10.1
POSTDOCTORAL EMPLOYMENT %												
EDUC INSTITUTION	56.1	69.2	24.2	18.5	38.9	28.1	47.9	35.2	23.1	32.5	60.7	47.9
INDUSTRY/BUSINESS	11.7	10.7	16.4	33.1	18.2	43.9	13.6	9.4	5.0	6.1	2.8	2.5
GOVERNMENT	7.2	3.6	9.0	4.6	13.3	10.7	15.2	14.1	6.5	7.5	6.4	5.7
NONPROFIT	2.8	1.8	3.2	1.2	2.3	3.4	2.0	3.6	1.6	2.5	3.5	1.9
OTHER & UNKN	2.5	1.4	3.3	1.9	.7	2.8	4.0	2.2	1.3	1.5	.7	2.4
POSTDOCT STATUS UNKN %	4.9	5.0	6.1	3.5	3.7	2.8	3.3	6.7	3.5	3.5	1.4	6.1
POSTDOCT WORK ACTIVITY %												
R & D	26.9	28.3	57.1	66.0	48.8	64.4	58.4	41.1	48.5	43.1	25.9	25.9
TEACHING	53.6	66.2	33.1	26.7	41.0	24.6	26.2	36.0	40.5	44.7	66.3	65.5
ADMINISTRATION	8.8	.7	.8	1.0	1.8	1.7	2.5	12.0	1.9	2.0	2.8	1.2
PROF. SERVICES	5.9	1.7	1.0	1.2	2.9	3.6	5.0	5.7	3.8	5.0	.0	1.6
OTHER	1.2	.4	1.6	1.4	2.9	1.4	3.1	1.5	1.2	1.4	.9	1.2
ACTIVITY UNKNOWN	3.3	2.5	6.1	3.4	2.4	3.9	4.6	3.4	4.0	3.5	3.8	4.4
POSTDOCT REGION OF EMPLOYMENT %												
NEW ENGLAND	5.5	5.2	9.9	5.0	5.0	5.6	1.4	3.4	3.5	2.9	5.7	4.4
MIDDLE ATLANTIC	14.3	16.4	12.6	20.2	8.8	15.7	4.3	12.3	9.2	11.0	11.5	12.4
EAST NO CENTRAL	14.6	13.9	10.1	16.2	10.4	11.4	11.3	11.0	14.5	12.1	18.2	11.6
WEST NO CENTRAL	6.2	5.5	3.6	5.6	5.0	4.0	8.7	8.5	7.1	7.1	7.6	6.8
SOUTH ATLANTIC	12.6	11.5	14.2	17.6	8.8	10.2	12.8	13.9	12.2	13.3	18.2	14.2
EAST SO CENTRAL	3.9	3.4	3.5	3.0	1.0	2.8	5.5	4.1	6.5	4.8	.0	4.2
WEST SO CENTRAL	6.2	5.2	5.5	6.1	11.7	7.1	6.8	4.7	6.5	6.9	8.6	7.4
MOUNTAIN	4.6	4.3	5.0	2.0	14.6	4.3	4.3	1.9	1.4	3.1	2.8	4.4
PACIFIC & INSULAR	11.2	13.4	9.9	6.2	13.0	13.9	6.7	9.1	12.6	9.6	8.6	12.0
FOREIGN	7.1	6.0	4.9	4.1	12.0	7.0	22.8	16.1	9.9	12.7	6.7	7.2
REGION UNKNOWN	13.4	14.8	20.1	13.5	9.3	17.5	15.0	14.5	16.0	16.1	11.5	14.8

Refer to explanatory notes on page 2.

TABLE 2. CONTINUED

PSYCHOLOGY	ANTHROPOLOGY & ARCHEOLOGY	SOCIOLOGY	ECONOMICS & ECONOMETRICS	POLIT SCI, INT RELATIONS	HISTORY	ENG AND AMER LANG & LIT	MOD FOREIGN LANG & LIT	CLASSIC LANG & LIT	PHILOSOPHY	SPEECH AS A DRAMATIC ART	FINE ARTS AND MUSIC	BUSINESS ADMINISTRATION	RELIGION AND THEOLOGY	EDUCATION
1883	225	506	971	634	1092	1093	784	86	350	267	254	584	212	5836
76.4	72.0	81.6	93.9	90.0	86.7	69.3	67.4	69.7	86.8	84.6	70.0	97.7	95.2	79.7
23.5	28.0	18.3	6.0	9.9	13.2	30.6	32.5	30.2	13.1	15.3	29.9	2.2	4.7	20.2
93.8	86.2	82.8	72.0	82.8	92.2	92.7	79.9	86.0	90.0	97.0	88.9	80.8	82.0	94.4
5.2	10.2	16.2	26.1	14.2	4.9	5.6	18.2	12.7	7.1	2.6	7.0	16.2	11.3	4.6
.8	3.5	.9	1.7	3.0	2.8	1.5	1.7	1.1	2.8	.3	3.9	2.9	6.6	.9
75.4	70.6	77.6	77.0	74.2	75.0	70.5	70.4	53.4	68.0	76.4	65.3	84.9	73.1	80.6
22.5	24.8	20.1	19.4	21.1	20.3	26.9	26.9	43.0	28.2	22.4	27.5	10.2	18.8	17.1
1.9	4.4	2.1	3.5	4.5	4.5	2.4	2.6	3.4	3.7	1.1	7.0	4.7	8.0	2.2
27.1	28.9	28.7	27.6	28.4	28.8	28.6	29.2	27.0	27.6	29.5	30.0	29.0	31.4	32.1
28.9	31.8	32.0	30.1	31.0	31.5	31.3	32.8	29.2	30.0	33.7	35.2	32.6	34.8	37.0
32.8	36.0	36.8	33.8	36.1	35.7	36.7	38.5	35.2	34.5	39.2	41.1	37.9	40.0	42.5
69.7	46.6	42.0	50.2	54.7	64.9	75.1	55.1	73.2	61.4	47.9	66.5	50.3	18.8	45.9
75.8	69.7	88.9	74.6	78.5	88.4	88.2	82.1	75.5	69.7	97.0	94.0	92.8	62.7	96.3
6.2	8.2	8.7	7.2	8.0	9.0	8.8	8.9	7.5	7.9	10.2	12.2	9.0	11.9	12.8
5.3	6.3	6.0	5.2	5.6	6.2	6.0	6.0	5.8	5.3	5.2	6.0	5.4	8.2	6.2
8.3	8.0	3.1	1.6	2.3	2.0	.7	1.7	3.4	.8	.3	2.3	.1	.9	.7
1.2	.0	.0	.3	.4	.0	.0	.1	.0	.2	.0	.0	.0	.0	.2
3.3	2.6	1.7	1.5	2.3	.8	.9	1.9	1.1	1.4	.3	1.9	.3	.9	.8
52.2	77.3	82.8	68.6	70.1	83.5	88.2	83.9	87.2	85.7	87.6	82.2	79.6	72.6	80.0
4.9	.4	.4	6.6	2.3	.9	.6	1.2	.0	1.4	2.2	.0	8.3	.4	1.4
15.2	2.2	3.3	9.2	6.6	2.4	.2	1.0	.0	1.7	.3	.0	4.9	.4	6.5
7.7	1.7	3.3	4.2	3.4	1.2	.1	1.0	1.1	.5	2.2	.7	.5	11.7	2.9
3.0	1.7	1.9	2.3	2.5	2.5	1.5	2.6	1.1	1.4	2.6	2.7	1.2	1.4	3.6
3.8	5.7	3.1	5.2	9.6	6.4	7.5	6.2	5.8	6.5	4.1	9.8	4.7	11.3	3.5
19.8	12.2	16.1	25.5	8.8	3.9	.3	3.6	2.6	2.5	2.3	2.7	6.6	1.6	7.8
43.2	82.4	77.6	64.6	77.0	87.5	95.2	90.3	94.8	90.5	84.2	88.9	79.3	78.8	49.7
3.1	1.6	2.1	2.8	6.8	3.2	.9	2.1	.0	1.5	6.3	5.5	7.4	6.5	29.0
29.9	.0	1.2	2.4	1.8	1.4	.3	.5	.0	2.2	2.7	.4	3.2	9.2	8.8
.8	1.0	.4	1.9	1.6	1.2	.9	.8	.0	.0	1.9	.4	1.8	2.1	1.0
2.8	2.6	2.3	2.6	3.7	2.6	2.3	2.4	2.6	3.1	2.3	1.8	1.4	1.6	3.5
6.4	5.8	5.8	5.1	5.5	8.1	7.8	9.7	11.6	8.8	2.7	3.6	3.8	9.7	4.3
17.2	15.9	13.1	14.1	16.1	17.7	17.0	17.3	16.8	14.7	10.6	18.8	8.5	13.0	13.0
15.2	15.4	17.4	12.4	12.4	13.5	20.1	15.0	15.5	16.3	26.3	12.8	16.4	12.5	16.4
5.4	3.1	7.1	4.9	6.3	6.7	6.1	4.2	7.7	6.9	7.8	9.1	5.2	8.7	8.0
12.0	6.3	13.5	17.0	15.0	13.1	11.9	11.3	20.7	10.3	8.6	13.3	17.3	13.5	12.0
4.2	3.1	3.6	3.0	2.5	4.8	3.5	2.1	1.3	4.4	4.3	4.5	3.9	6.5	4.9
5.0	3.1	4.5	5.5	5.3	6.1	5.2	4.9	1.3	5.3	7.4	2.7	7.2	3.2	6.9
3.8	7.4	3.4	4.6	3.8	3.0	4.1	4.6	1.3	4.4	5.9	4.5	7.9	3.2	5.5
14.2	17.5	13.1	10.1	9.8	10.6	9.5	12.0	3.9	10.3	14.9	10.5	13.3	8.1	10.4
4.7	12.7	10.9	14.2	9.8	4.8	5.4	6.3	7.7	5.9	2.7	4.1	10.4	10.3	3.9
11.3	9.0	7.3	8.6	13.1	11.2	8.9	12.0	11.6	12.2	8.2	15.6	5.6	10.8	14.1

SOURCE: NRC, Office of Scientific Personnel, Doctorate Records File

TABLE 3
PERCENTAGE OF FY 1970 DOCTORATE RECIPIENTS BY SOURCES OF SUPPORT IN GRADUATE SCHOOL BY SUMMARY FIELDS

SOURCES OF SUPPORT IN GRADUATE SCHOOL		DOCTORATE RECIPIENTS BY FIELD: PHYSICAL SCIENCES	ENGINEERING	BIOLOGICAL SCIENCES	SOCIAL SCIENCES	ARTS AND HUMANITIES	PROF. FIELDS	EDUCATION	TOTAL
NSF FELLOWSHIP	N	682	287	252	222	30	9	290	1772
	V%	12.6	8.6	5.7	5.0	.8	.9	5.2	6.3
	H%	38.5	16.2	14.2	12.5	1.7	.5	16.4	100.0
NSF TRAINEESHIP	N	576	427	217	143	10	2	28	1403
	V%	10.6	12.7	4.9	3.2	.3	.2	.5	5.0
	H%	41.1	30.4	15.5	10.2	.7	.1	2.0	100.0
NIH FELLOWSHIP	N	249	25	559	450	8	12	22	1325
	V%	4.6	.7	12.7	10.1	.2	1.2	.4	4.7
	H%	18.8	1.9	42.2	34.0	.6	.9	1.7	100.1
NIH TRAINEESHIP	N	94	52	1042	379	8	9	24	1608
	V%	1.7	1.6	23.6	8.5	.2	.9	.4	5.7
	H%	5.8	3.2	64.8	23.6	.5	.6	1.5	100.0
AEC FELLOWSHIP	N	67	74	36	2			2	181
	V%	1.2	2.2	.8	.0	.0	.0	.0	.6
	H%	37.0	40.9	19.9	1.1	.0	.0	1.1	100.0
NASA TRAINEESHIP	N	541	358	107	44	5		5	1060
	V%	10.0	10.7	2.4	1.0	.1	.0	.1	3.8
	H%	51.0	33.8	10.1	4.2	.5	.0	.5	100.1
NDEA FELLOWSHIP	N	474	252	361	516	734	107	694	3138
	V%	8.7	7.5	8.2	11.6	19.2	10.4	12.5	11.2
	H%	15.1	8.0	11.5	16.4	23.4	3.4	22.1	99.9
GI BILL	N	209	195	263	413	421	141	1048	2690
	V%	3.8	5.8	6.0	9.3	11.0	13.6	18.9	9.6
	H%	7.8	7.2	9.8	15.4	15.7	5.2	39.0	100.1
OTHER FEDERAL SUPPORT	N	349	295	404	702	253	149	687	2839
	V%	6.4	8.8	9.2	15.8	6.6	14.4	12.4	10.1
	H%	12.3	10.4	14.2	24.7	8.9	5.2	24.2	99.9
UNIVERSITY FELLOWSHIP	N	978	553	490	1052	1464	283	623	5443
	V%	18.0	16.5	11.1	23.7	38.2	27.4	11.2	19.4
	H%	18.0	10.2	9.0	19.3	26.9	5.2	11.4	100.0
WOODROW WILSON FELLOWSHIP	N	78	4	12	159	315	6	7	581
	V%	1.4	.1	.3	3.6	8.2	.6	.1	2.1
	H%	13.4	.7	2.1	27.4	54.2	1.0	1.2	100.0
OTHER NATIONAL FELLOWSHIP	N	102	73	61	228	207	78	137	886
	V%	1.9	2.2	1.4	5.1	5.4	7.6	2.5	3.2
	H%	11.5	8.2	6.9	25.7	23.4	8.8	15.5	100.0
TEACHING ASSISTANTSHIP	N	3605	1269	1623	2163	2339	471	1769	13239
	V%	66.4	37.9	36.8	48.7	61.1	45.6	31.9	47.2
	H%	27.2	9.6	12.3	16.3	17.7	3.6	13.4	100.1
RESEARCH ASSISTANTSHIP	N	3078	1834	1914	1740	409	264	1071	10310
	V%	56.7	54.7	43.4	39.2	10.7	25.6	19.3	36.8
	H%	29.9	17.8	18.6	16.9	4.0	2.6	10.4	100.2
EDUC. FUNDS OF INDUSTRY	N	391	417	79	101	59	83	136	1266
	V%	7.2	12.4	1.8	2.3	1.5	8.0	2.4	4.5
	H%	30.9	32.9	6.2	8.0	4.7	6.6	10.7	100.0
OTHER INSTITUTION FUNDS	N	301	211	342	617	538	163	633	2805
	V%	5.5	6.3	7.8	13.9	14.1	15.8	11.4	10.0
	H%	10.7	7.5	12.2	22.0	19.2	5.8	22.6	100.0
OWN EARNINGS	N	1011	892	830	1746	1626	513	3406	10024
	V%	18.6	26.6	18.8	39.3	42.5	49.7	61.3	35.7
	H%	10.1	8.9	8.3	17.4	16.2	5.1	34.0	100.0
SPOUSE'S EARNINGS	N	641	409	631	992	959	275	1337	5244
	V%	11.8	12.2	14.3	22.3	25.0	26.6	24.1	18.7
	H%	12.2	7.8	12.0	18.9	18.3	5.2	25.5	99.9
FAMILY CONTRIBUTIONS	N	240	179	226	430	529	107	328	2039
	V%	4.4	5.3	5.1	9.7	13.8	10.4	5.9	7.3
	H%	11.8	8.8	11.1	21.1	25.9	5.2	16.1	100.0
BORROWINGS	N	334	272	321	570	651	176	1042	3366
	V%	6.2	8.1	7.3	12.8	17.0	17.0	18.8	12.0
	H%	9.9	8.1	9.5	16.9	19.3	5.2	31.0	99.9
OTHER	N	217	198	264	317	255	95	397	1743
	V%	4.0	5.9	6.0	7.1	6.7	9.2	7.1	6.2
	H%	12.4	11.4	15.1	18.2	14.6	5.5	22.8	100.0
UNDUPLICATED TOTAL	N	5430	3351	4409	4439	3829	1033	5553	28044

Refer to explanatory note on page 3.

SOURCE: NRC, Office of Scientific Personnel, Doctorate Records File

TABLE 4
NUMBER OF FY 1970 DOCTORATE RECIPIENTS BY STATE AND SUMMARY FIELD AND NUMBER OF INSTITUTIONS

STATE OF DOCTORAL INSTITUTION	NUMBER OF DOCTORATE RECIPIENTS BY FIELD									NO. OF DOCT. INST.
	PHYSICAL SCIENCES	ENGI-NEERING	BIOL. SCIENCES	SOCIAL SCIENCES	ARTS AND HUMANITIES	PROF. FIELDS	EDUCA-TION	OTHER & UNSPEC.	TOTAL	
U.S. TOTAL	5607	3432	4564	4649	4044	1113	5836	191	29436	233
ALABAMA	34	24	41	15	8	14	95		231	2
ALASKA	5		2						7	1
ARIZONA	58	42	54	59	17	12	133		375	2
ARKANSAS	17	8	15	7	3	11	59	1	121	1
CALIFORNIA	616	491	475	469	386	110	450	116	3113	22
COLORADO	121	63	82	77	70	14	209	1	637	5
CONNECTICUT	103	39	75	81	145	23	37	3	506	3
DELAWARE	21	14	9	6	5		4		59	1
DIST. OF COL.	86	28	62	112	82	48	80		498	5
FLORIDA	95	53	81	119	88	23	193	3	655	3
GEORGIA	49	36	62	48	52	23	75		345	6
HAWAII	10		25	12	3		3		53	1
IDAHO	11	3	11	1			19		45	1
ILLINOIS	360	250	258	321	272	101	278	4	1844	9
INDIANA	216	150	192	175	155	58	345	3	1294	5
IOWA	122	90	127	86	56	26	110		617	3
KANSAS	64	33	125	68	42	18	39		389	3
KENTUCKY	34	9	40	38	17		18		156	2
LOUISIANA	72	17	82	51	73	10	25		330	3
MAINE	1	5	9	6			3		24	1
MARYLAND	149	64	103	83	82	8	82	2	573	2
MASSACHUSETTS	426	214	151	304	262	85	231	4	1677	14
MICHIGAN	246	147	219	259	224	63	396	4	1558	6
MINNESOTA	65	54	135	116	64	13	94		541	1
MISSISSIPPI	7	3	52	17	20	9	69		177	3
MISSOURI	112	72	82	102	89	26	116		599	5
MONTANA	8	11	24	6	1		13		63	2
NEBRASKA	33	10	35	31	22	8	73		212	1
NEVADA	1			7	3				11	1
NEW HAMPSHIRE	30	5	12	3					50	2
NEW JERSEY	136	107	66	72	105	23	45		554	6
NEW MEXICO	34	25	6	23	29		65		182	3
NEW YORK	591	305	372	655	531	119	679	8	3260	29
NORTH CAROLINA	98	65	154	107	121	17	74	2	638	5
NORTH DAKOTA	18		24	6	1		37		86	2
OHIO	248	146	159	180	201	53	256	14	1257	10
OKLAHOMA	57	73	85	62	29	12	165	1	484	3
OREGON	70	12	97	77	30	12	137	2	437	3
PENNSYLVANIA	306	242	189	208	205	50	283	9	1492	16
RHODE ISLAND	65	25	25	28	38	4		2	187	3
SOUTH CAROLINA	34	18	13	19	15	2	11		112	3
SOUTH DAKOTA	9		16	9			34		68	3
TENNESSEE	67	42	67	91	55	12	95		429	4
TEXAS	224	189	191	137	121	38	289	6	1195	11
UTAH	78	42	70	57	20	9	132		408	3
VERMONT	14		10	4	5				33	2
VIRGINIA	71	65	52	24	31	3	52		298	4
WASHINGTON	107	47	87	81	61	18	59		460	2
WEST VIRGINIA	17	10	29	10	5		23		94	1
WISCONSIN	180	83	193	119	200	38	116	6	935	3
WYOMING	11	1	19	1			35		67	1

Refer to explanatory note on page 3.

SOURCE: NRC, Office of Scientific Personnel, Doctorate Records File